



STATE OF MARYLAND

DHMH

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September 2, 2011

Public Health & Emergency Preparedness Bulletin: # 2011:34 **Reporting for the week ending 08/27/11 (MMWR Week #34)**

CURRENT HOMELAND SECURITY THREAT LEVELS

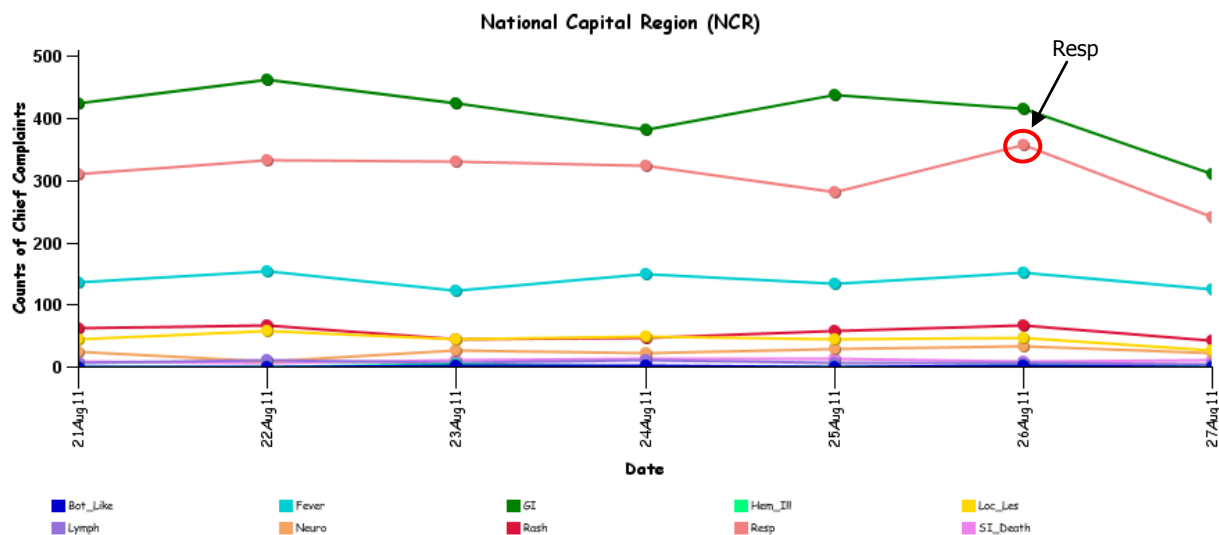
National: No Active Alerts
Maryland: Level One (MEMA status)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

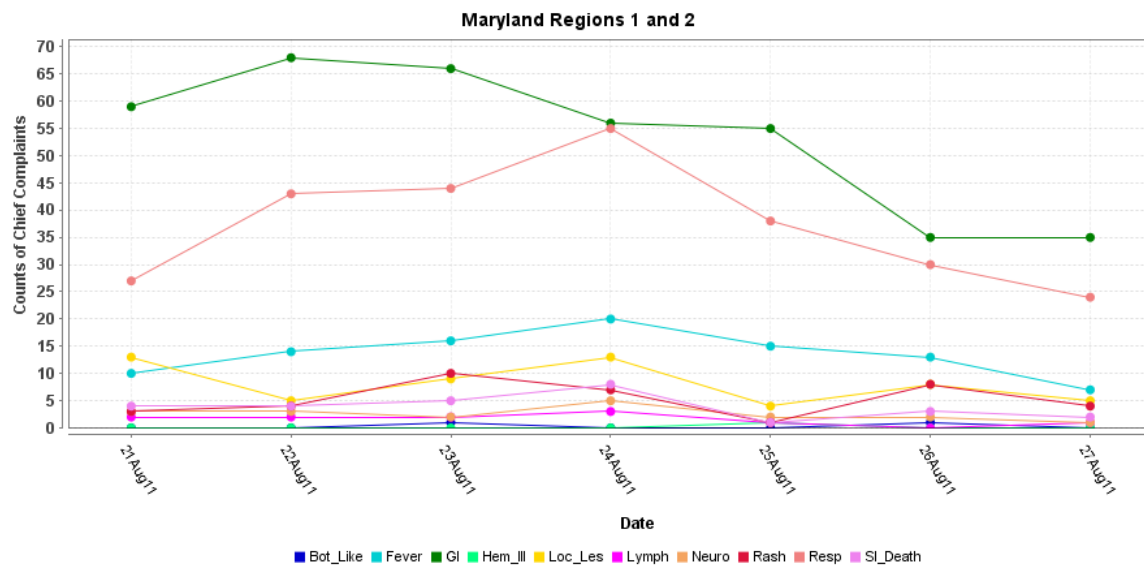
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

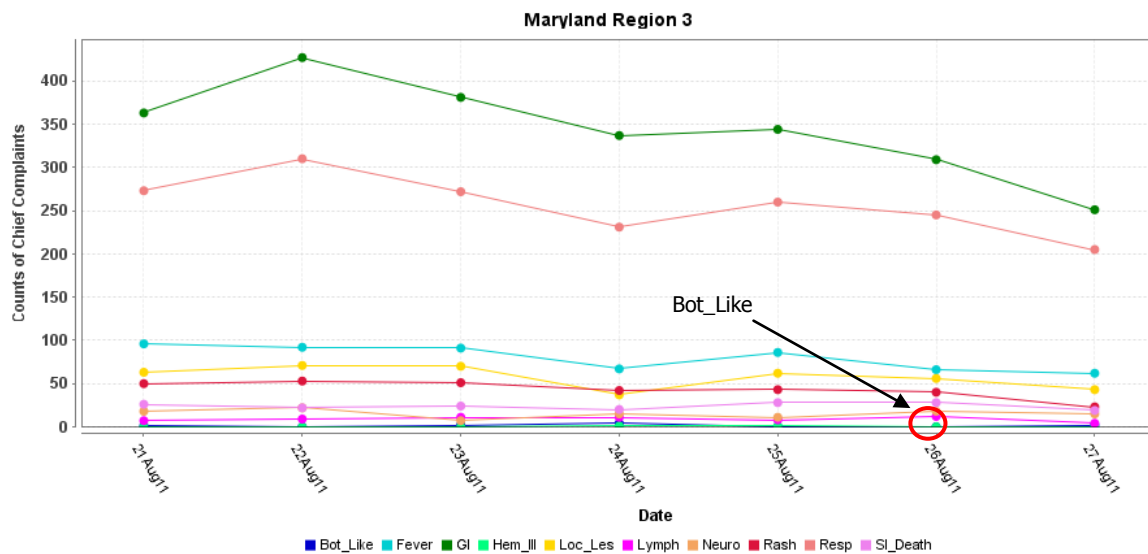


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

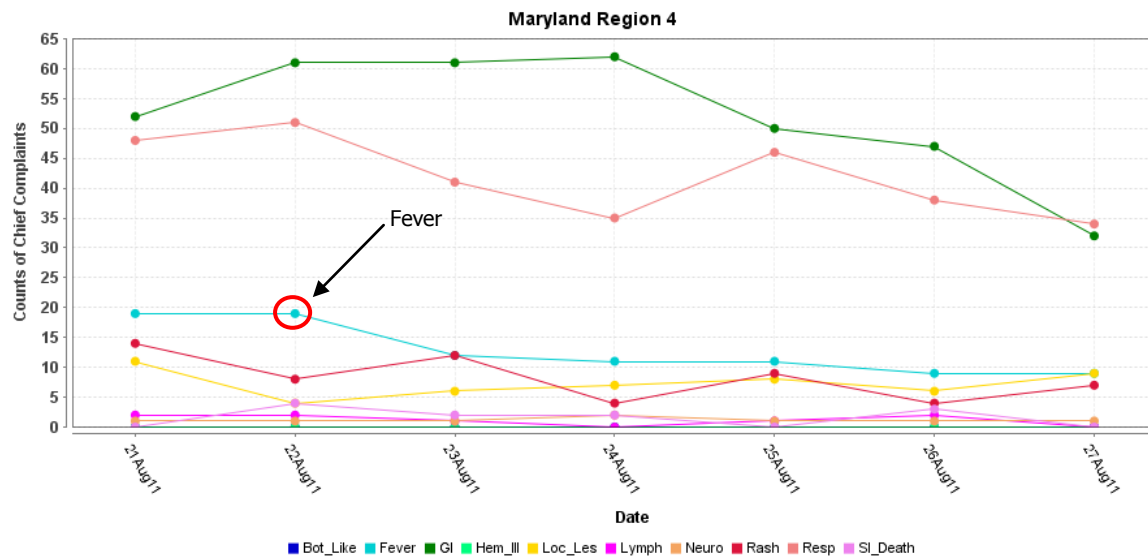
MARYLAND ESSENCE:



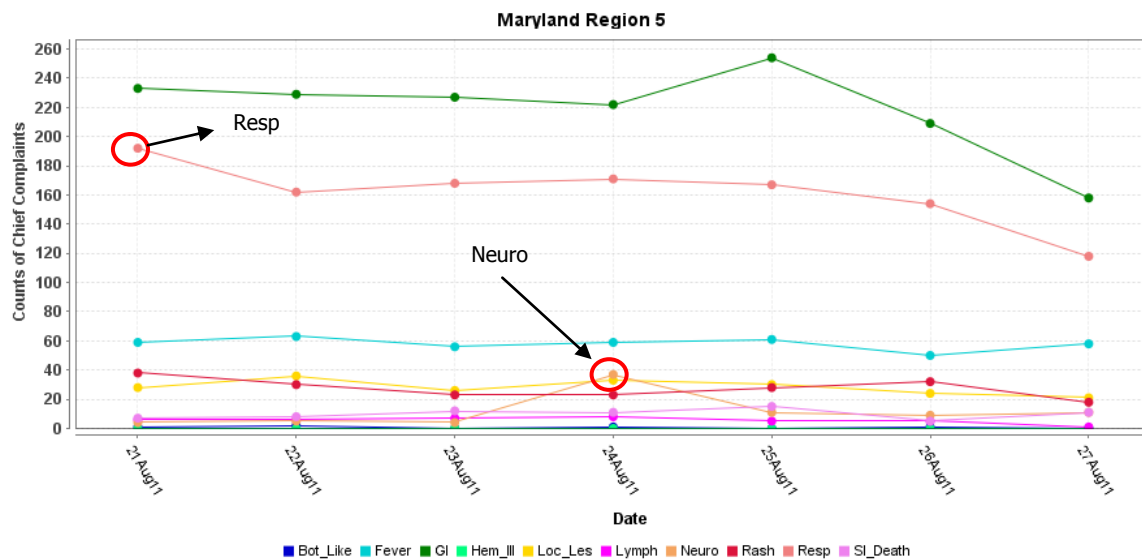
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

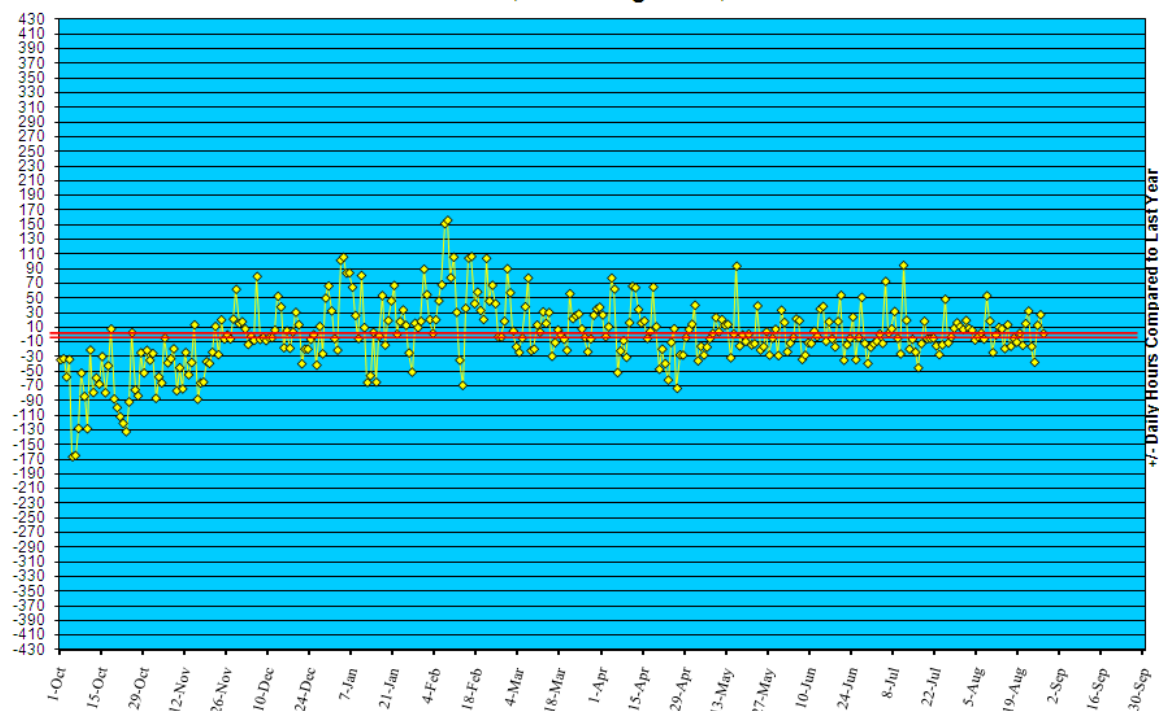


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/10.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '10 to August 27, '11



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in July 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (August 21 – August 27, 2011):	17	0
Prior week (August 14 – August 20, 2011):	25	0
Week#34, 2010 (August 22 – August 28, 2010):	9	0

1 outbreak was reported to DHMH during MMWR week 34 (August 21 – August 27, 2011).

1 gastroenteritis outbreak in a nursing home

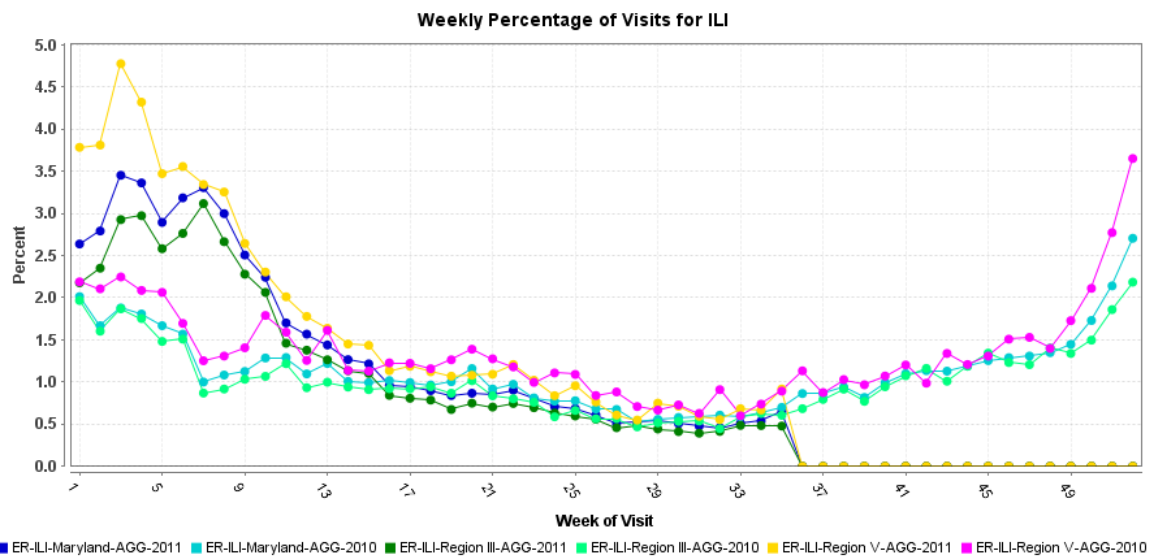
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May.

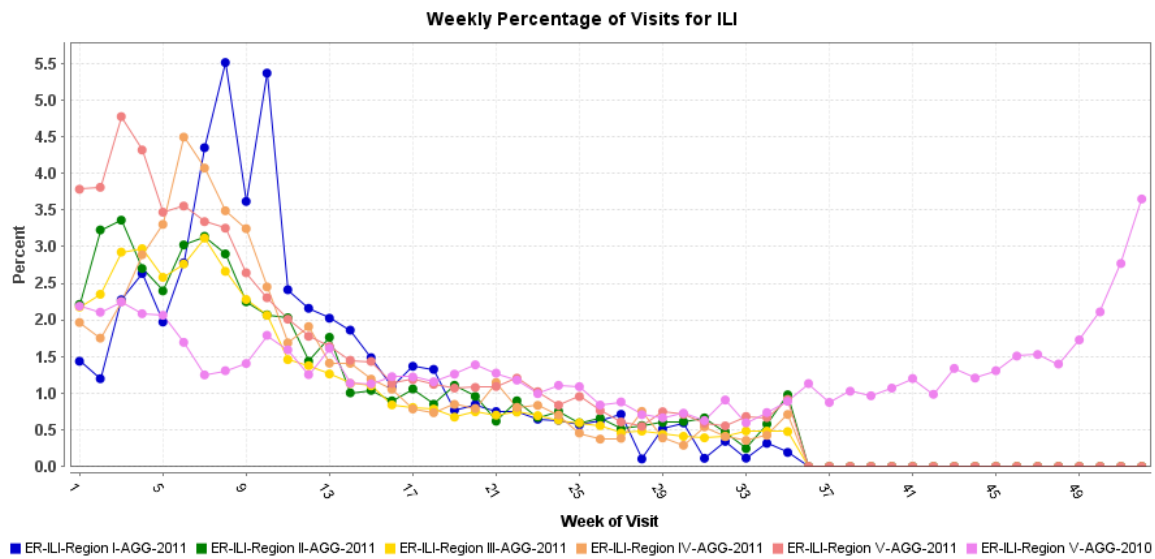
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



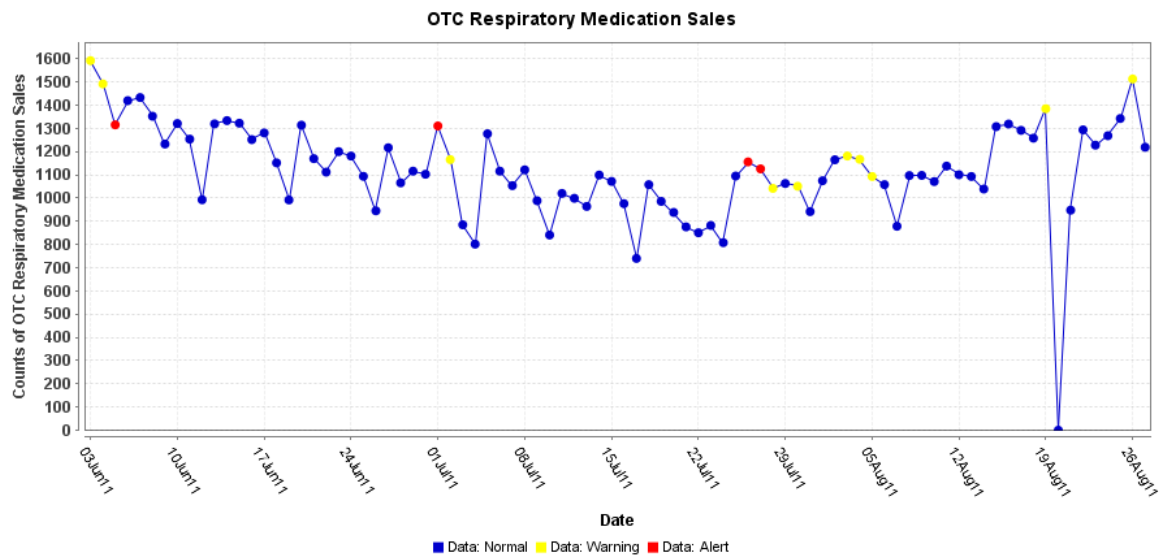
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

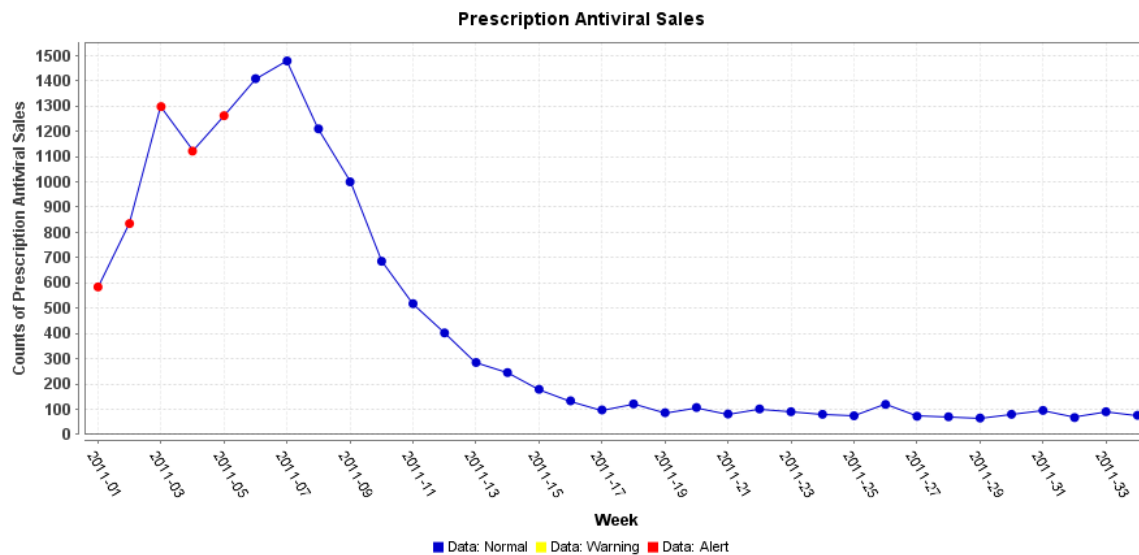
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of August 19, 2011, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 565, of which 331 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA, HUMAN (CAMBODIA): 19 August 2011, The Ministry of Health (MoH) of the Kingdom of Cambodia has announced a confirmed case of human infection with avian influenza A (H5N1) virus. The case was a 6-year-old female from Taing Thleung Village, Mepring Commune, Cheung Prey District, Kampong Cham Province. She developed symptoms on 7 Aug 2011, was initially treated by local practitioners with no effect, and was later admitted to Kantha Bopha Children's Hospital in Phnom Penh on 12 Aug 2011. She died on 14 Aug 2011, 2 days after admission. There have been reports of poultry die offs in her village, and the case is reported to have had exposure to sick poultry. This female is the 18th person in Cambodia to become infected with the H5N1 virus and the 16th to die from complications of the disease. All 8 cases of H5N1 infection in humans in Cambodia this year [2011] have been fatal. The National and local Rapid Response Teams (RRT) are conducting an outbreak investigation and response following the national protocol. Health education messages are ongoing in the community. To date, none of the human contacts have tested positive for A(H5N1).

NATIONAL DISEASE REPORTS

ANTHRAX (MN): 26 August 2011, The Minnesota Department of Health said today [26 Aug 2011] that a man found to have inhalation anthrax this month had a prior chronic lung condition, which may have made him more susceptible to infection with anthrax, and had multiple exposures to soil and animal products. The man, in his 60s, had traveled through several states in July and early August [2011], where anthrax is known to be in the soil and to have caused infections in animals, including North Dakota, South Dakota, Montana and Wyoming. He was hospitalized in early August with pneumonia, was determined to have inhalation anthrax and is now recovering. The *Bacillus anthracis* strain isolated from the patient was found by genetic testing to be similar to other strains isolated in North America. No other human cases of anthrax have been reported this year. The state health department investigated the case along with the Centers for Disease Control and Prevention. (Anthrax is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

LEGIONELLOSIS (NY): 25 August 2011, Upon investigation into reports of workers at Upstate Shredding's Route 38 Owego, New York, facility contracting Legionnaires' disease, it was confirmed on Monday [22 Aug 2011] that 5 workers were diagnosed with the disease, and that measures have been put in place to avoid future outbreaks. According to Johannes Peeters, from Tioga County [New York State] Environmental Health, there have been 5 confirmed cases of the disease since 2009. But Peeters also noted that only the employees working at the shredder were at risk, and that there have been protective measures put in place to eliminate any future outbreaks. "The only concern for this is for the people working directly at that location," said Peeters. And the officials at the National Institute for Occupational Safety and Health (NIOSH) out of West Virginia agreed. Rachel L. Bailey, a Public Health Service Medical Officer for the Centers for Disease Control and Prevention at NIOSH, also confirmed the 5 known cases of Legionnaires' disease. Bailey also further explained what might have led to the outbreak at the plant. "Water is used during the shredding process," she stated. She continued, "When the shredder is operating, municipal water is pumped into the shredding chamber through pipes fitted to each side of the shredder head to provide cooling and lubrication. The interior of the shredding chamber can reach 500 deg F and much of the water evaporates during the shredding operation; however, the shredded material that exits the shredder remains wet as it proceeds on the conveyor system to be separated into ferrous and non-ferrous portions." During a 1 and 2 Jun 2011 site visit made by NIOSH to the Owego facility, which was requested by owner Adam Weitsman in May of 2011, representatives observed multiple pools of standing/stagnant water around the facility. Bailey noted that stagnant water is an ideal environment for *Legionella* growth if heated such as by sunlight. Water samples were taken from several pools of standing water, and the laboratory identified *Legionella* bacteria in all those samples. They also noted that *Legionella* was also identified in water dripping from the shredder onto the exit conveyor belt that contains the shredded material as well as in a swab sample taken from a conveyor belt in the picking shed at the facility. A NIOSH report, dated 22 Jul 2011, confirmed that all the workers who were diagnosed with Legionnaires' disease worked in or around standing water and/or performed picking activities that involve manually removing copper and other materials observed passing on a moving conveyor. But standing water, according to Bailey, is the culprit in this case. The July report also noted that the workers that contracted the illness prior to the testing at the facility were subsequently tested for Legionnaires' disease. Each test, according to Bailey, came out positive. With their interim letter and report sent to Adam Weitsman in July, NIOSH made recommendations for the facility -- recommendations that Weitsman has since put in place. The report recommended that all standing water be eliminated in the facility, that grading be done around the grounds to eliminate standing water, that workers in the specific areas where the *Legionella* bacteria was confirmed wear protective respirators, and that conveyors and the immediate area surrounding them be disinfected with a chlorine mixture. In an interview with Weitsman on Wednesday [24 Aug 2011], he stated that he was working with these agencies to correct the problem. "We had a case awhile ago," said Weitsman, "and we thought it was the flu." Weitsman grew concerned when others became ill, and that is when he requested that NIOSH come in and examine things. According to Peeters from Environmental Health, Weitsman was concerned, and he was the one who made the call. Weitsman also talked of things he has put in place since the discovery of the *Legionella* bacteria within the plant. A recent purchase of a USD 21 million shredder that utilizes 10 percent of the water that the old shredder utilized, according to Weitsman, will help out tremendously. "The old shredder was 15 years old," said Weitsman. "The water could have been sitting in there for a very long time." Weitsman has also hired a former official from the Occupational Safety and Health Administration (OSHA) to serve as his safety coordinator, and has enforced the wearing of protective respirators by employees working in the specific area. Weitsman also noted that they have started grading to eliminate pools of standing water. The last confirmed case of Legionnaires' Disease at the site, according to NIOSH, was in mid-July, and followed their visit. The precautionary recommendations to Weitsman were implemented shortly after. NIOSH also noted that there is no risk of the *Legionella* bacteria becoming airborne and spreading into the community as they do not utilize cooling towers. According to Bailey, if *Legionella* is spread through cooling towers, it can travel as far as 3.7 miles away, as was documented in an epidemic of Legionnaires' disease that took place in Pas-de-Calais in northern France in 2003-2004. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS (USA): 23 August 2011, *S. Altona* Outbreak Investigation: As of 23 Aug 2011, a total of 65 individuals infected with the outbreak strain of *S. Altona* have been reported from 20 states. Among the persons with reported dates available, illnesses began between 25 Feb 2011 and 30 Jul 2011. Infected individuals range in age from less than one year old to 92 years old, and 32 percent of ill persons are 5 years of age or younger. 52 percent of patients are female. Among the 57 patients with available information, 17 (30 percent) were hospitalized. No deaths have been reported. In interviews, ill persons answered questions about contact with animals and foods consumed during the week before becoming ill. 41 (76 percent) of 54 ill persons interviewed reported contact with live poultry (chicks, chickens, ducklings, ducks, geese, and turkeys) before becoming ill. Of ill persons who could recall the type of live poultry with which they had contact, 39 identified chicks, ducklings, or both, and 32 (89 percent) of 36 ill persons with available vendor information reported purchasing chicks and ducklings from multiple locations of a nationwide agriculture feed store, Feed Store Chain A. Ill persons reported purchasing live poultry for either backyard flocks to produce eggs or as pets. In May and June 2011, laboratory testing yielded *S. Altona* bacteria from multiple samples: 3 samples from a chick and its environment collected from an ill person's household in Ohio, 3 samples collected from chick and duckling displays at 2 locations of Feed Store Chain A in North Carolina, and 3 samples from a chicken and 2 ducks collected from an ill person's household in

Vermont. Findings of multiple trace back investigations of live chicks and ducklings from homes of ill persons have identified a single mail-order hatchery in Ohio as the source of these chicks and ducklings. *S. Johannesburg* Outbreak Investigation: As of 23 Aug 2011, a total of 27 individuals infected with the outbreak strain of *S. Johannesburg* have been reported from 15 states. Among the persons with reported dates available, illnesses began between 19 Mar 2011 and 28 Jun 2011. Infected individuals range in age from less than one year old to 60 years old, and 74 percent of ill persons are 5 years of age or younger. 59 percent of patients are female. Among the 21 patients with available information, 8 (38 percent) were hospitalized. No deaths have been reported. In interviews, ill persons answered questions about contact with animals and foods consumed during the week before becoming ill. 17 (71 percent) of 24 ill persons interviewed reported contact with live poultry before becoming ill. Of ill persons who could recall the type of live poultry with which they had contact, 14 identified chicks, ducklings, or both, and 10 (71 percent) of 14 ill persons with available vendor information reported purchasing chicks and ducklings from multiple locations of the same nationwide agriculture feed store identified in the outbreak of *S. Altona* infections, Feed Store Chain A. Findings of multiple trace back investigations of live chicks and ducklings from homes of ill persons have identified the same single mail-order hatchery in Ohio identified in the outbreak of *S. Altona* infections as the source of these chicks and ducklings. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

JAPANESE ENCEPHALITIS (INDIA): 23 August 2011, More than 350 cases of Japanese encephalitis and nearly 90 deaths due to the viral disease were reported in Assam this year [2011], the Rajya Sabha was told Tuesday [23 Aug 2011]. There were 351 cases and 89 deaths due to Japanese encephalitis [virus infection] reported in Assam till 9 Aug [2011] in the current year, Minister of State for Health and Family and Welfare Sudip Bandyopadhyay said. Japanese encephalitis is a viral disease transmitted by mosquitoes, causing inflammation of the membrane around the brain, often fatal if not treated soon. "For the prevention and control of the vector-borne disease [virus], including Japanese encephalitis, the Indian government is implementing an integrated National Vector Borne Disease Control Program (NVBDCP) under the National Rural Health Mission," the minister added. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

BOTULISM (CHILE): 24 August 2011, On 27 Jun 2011, the Military Hospital in Santiago, Chile, received 2 male patients, who were transferred from the hospital in Esquel, Argentina, for further diagnosis and treatment. The patients were members of a Chilean family (father, 45 years, and son, 15 years), who had been on vacation in Patagonia. There, the father suffered from acute nausea and vomiting and both from acute diplopia [double vision], which occurred 12 hours after the family had eaten pizza in a restaurant in Rio Mayo, Chubut province of Argentina. 3 other family members, who had participated in the same meal, stayed asymptomatic. With increasing symptoms, father and son attended the local hospital, where they were hospitalized. The father developed facial paralysis, difficulty swallowing, and progressive general paralysis with respiratory failure requiring intubation and mechanical ventilation. With the suspected diagnosis of botulism, both were transferred after 48 hours to the intensive care unit of the Military Hospital in Santiago, Chile, where they received botulism specific antiserum. The son, who developed temporary urinary retention and constipation, had a benign course and recovered completely after 7 days, whereas the father required prolonged mechanical ventilation. On the day of this report (24 Aug 2011), he is still intubated, but his neurological dysfunctions are slowly improving. The diagnosis of foodborne botulism was confirmed by a positive mouse inoculation test (Instituto Malbran, Buenos Aires, Argentina) detecting botulism toxin in a blood sample of the father. (Botulism is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

VIRAL HEMORRHAGIC FEVER WITH RENAL SYNDROME (RUSSIA): 22 August 2011, Cases of hemorrhagic fever with renal syndrome (HFRS) in Udmurtia are on the increase. Epidemiologists expect cases to peak in early September [2011]. The regional Rospotrebnadzor [Federal Service for Consumer Protection and Human Welfare] has announced 107 HFRS cases in July and around 100 cases so far in August. Since the epidemiological situation is deteriorating in the region, public health officials are increasing dissemination of advisory information and are undertaking rodent control measures around populated areas. (Viral Hemorrhagic Fever is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

TICK-BORNE ENCEPHALITIS (SWEDEN): 26 August 2011, The number of people infected by tick-borne diseases, such as tick-borne encephalitis, has gone up this year. So far in August [2011], 66 cases of the deadly disease tick-borne encephalitis have been reported, which is more than during any other month in the past 4 years. "It looks like there will be more cases in total in 2011. The season for tick-borne encephalitis started early," Marika Hjertqvist, an epidemiologist at the Swedish Institute for Infectious disease control, told Swedish Radio News. The weather plays a big role when it comes to spreading the disease since a mild winter and a warm summer usually means more ticks and also that people spend more time outdoors. In total this year 144 cases of tick-borne encephalitis have been reported already compared to the total of 174 for the whole of 2010. (Viral Encephalitis is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmh.maryland.gov/>

Maryland's Resident Influenza Tracking System: <http://dhmh.maryland.gov/flusurvey>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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